Discovery Area
Intermediate Level

Purpose
To use land cover maps to solve problems

Overview
Students will work to determine the location of a hospital while inflicting the least impact on the environment. They will utilize the unsupervised classified image from the remote sensing protocol to make their analysis and decision. The format of a town meeting will serve as the presentation of group work and for the overall class decision as to where to build the new hospital.

Time
Two to four class periods

Level
Intermediate

Key Concepts
Humans have an impact on the amount and type of land cover types.

Animals and plants are affected when land cover types change.

Humans need to be aware of the impact of land developments.

Skills
Analyzing different scenarios that change the land cover types of their areas

Predicting how the changes will affect the living organisms dependent upon that cover type

Evaluating solutions to various scenarios

Presenting their development plans to the class

Materials and Tools
A hard copy of the students' land cover map from the remote sensing protocols

Prerequisites
Students should have completed the remote sensing protocol.

Knowledge of the terms dominant, subdominant, rare, and isolated land cover types

Group presentation skills

What To Do and How To Do It

1. Divide the class into groups of three or four and discuss with your students what the land cover types are shown on the unsupervised clustered map. Have them list them in a chart like the one below.

a. Dominant	b. Subdominant	c. Rare or Isolated
1.	1.	1.
2.	2.	2.
3.	3.	3.
4.	4.	4.

2. Within the class thoroughly discuss each of the land cover areas. Pay close attention to living as well as non-living constituents. Have groups decide the three most desirable locations for a hospital, including parking lots and roads.

Welcome

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Appendix

3. Using the chart, the students compare the land cover areas. How will the proposed development affect the plants and animals listed?

4. The students discuss the options with their group and narrow their decision to one.

5. The students construct a presentation board.
   - They enlarge the original classified image so that the land cover areas are easily recognizable.
   - Place the hospital, road, and parking lots that will be part of the development on the classified image basing the size on other buildings in the image.

6. The students prepare a presentation for the class. The presentation will take the form of a town meeting. Students will role-play local citizens and vote on the best place for placement of the hospital. Each presentation will be intended to persuade class mates that the team has picked the best spot.

7. After viewing all the other presentations, the students indicate which location they liked best and why.

8. After voting on an area, is there agreement with the class decision? Why or why not? Could there be more than one answer?